

Date: Friday, 8/31/2007 11:53:42 AM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : DOUBLER
Job Number : 34381	
Estimate Number : 11473	
P.O. Number : <i>N/A</i>	Part Number : D3140301
This Issue : 8/31/2007 S.O. No. : <i>N/A</i>	Drawing Number : D3140 REV F
Prsht Rev. : NC	Project Number : <i>N/A</i>
First Issue : <i>N/A</i> Type : SMALL /MED FAB	Drawing Revision : <i>F</i>
Previous Run : 26797	Material : <i>N/A</i>
Written By : <i>[Signature]</i>	Due Date : 9/4/2007 Qty: 3 Um: Each
Checked & Approved By : <i>[Signature]</i>	
Comment : Est. rev A 02.11.06 New issue KJ/RF	
Est. Rev B 06.04.18 New dwg rev. ecn781 EC	
EST rev.C 06.04.25 Waterjet EC	
Est. rev.D added scuffing NCR 061 EC	
Est Rev:E As per ECN #829 06-11-20 JLM	

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M6061T6S063	6061-T6 .063 Sheet
-----	-------------	--------------------



Comment: Qty.: 2.9166 sf(s)/Unit Total : 8.7498 sf(s)  
 Material: 6061-T6 (QQ-A-250/11) 0.063" thick (M6061T6S.063)  
 Batch: *M 18556 B07-09-02*

2.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



Comment: FLOW WATER JET  
 1-Cut as per Dwg D  
 Dwg Rev: *E F* *B07-09-02*  
 Prog Rev: *E*  
 2-Deburr if necessary

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------



Comment: SECOND CHECK

*En 07/07/04 (x3)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: PD Date: 07/09/06  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 8/31/2007 11:53:42 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: DOUBLER

Job Number: 34381

Part Number: D3140301

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Scuff surfaces with 80grit sandpaper per QSI 006

2-Deburr.

No sharp edges

SAD 07/09/06

(3)

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Er 07/02/06 (X3)

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

M. H

07/09/06

(3X)

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

07/18/06 (3)

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

57238A

07/19/06

(3)

10.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

07/19/06 (3)

Job Completion



07/09/06

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN #	DRAWN BY CB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED JH	APPROVED #	DRAWING NO. D3140	REV. F SHEET 1 OF 7
DATE 06.10.06		TITLE DOOR	SCALE NTS
A	02.04.18	NEW ISSUE	
B	03.01.23	REMOVE -65/-81/-83; ADD -301/-303	
C	04.11.08	CHANGE DELASTEK SPEC. TEC-77; ADD PART MARKING; ADD NOTES 11, 12, 13; CHANGE ANGLE -95/-97/-98 TO 106°	
D	05.11.23	ADD -103/-104/-105/-106; REMOVE -67	
E	06.06.09	1.75 WAS 1.88, 4.75 WAS 4.13 ON -08/-07, 1.00 WAS 1.20 ON -09/-10	
F	06.10.06	ADD NOTE 14; CORRECT PART TITLE, NOW D3140-09/-92/-104 SHOWN D3140-10/-91/-103 OPPOSITE	

**RELEASED**

06.11.13

QTY -05	QTY -06	QTY -07	QTY -08	QTY -09	QTY -10	PART NUMBER	DESCRIPTION
X						D3140-05	DOOR
	X					D3140-06	DOOR
		X				D3140-07	DOOR
			X			D3140-08	DOOR
		1		X		D3140-09	DOUBLER ASSEMBLY
			1		X	D3140-10	DOUBLER ASSEMBLY
3	3					D3140-57	PAD
1	1					D3140-59	PAD
2	2					D3140-61	PAD
2	2					D3140-63	PAD
		1	1			D3140-69	PAD
		1	1			D3140-71	PAD
		1	1			D3140-73	PAD
		1	1			D3140-75	PAD
		1	1			D3140-77	PAD
		1	1			D3140-79	PAD
				1	1	D3140-85	ANGLE
1	1					D3140-87	DOUBLER
				1	1	D3140-89	DOUBLER
		1				D3140-91	DOUBLER
			1			D3140-92	DOUBLER
3	3					D3140-95	DOUBLER
1						D3140-97	DOUBLER
	1					D3140-98	DOUBLER
		1	1			D3140-99	DOUBLER
		2	2			D3140-101	DOUBLER
		1				D3140-103	DOUBLER
			1			D3140-104	DOUBLER
		1				D3140-105	DOUBLER
			1			D3140-106	DOUBLER
1	1					D3140-241	DOUBLER
1		1				D3140-301	DOUBLER
	1		1			D3140-303	DOUBLER
				5	5	MS20426AD3-4	RIVET

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NO. 34381



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CHECKED JH	APPROVED #	DRAWING NO. D3140	REV. F SHEET 2 OF 7
DATE 06.10.06		TITLE DOOR	SCALE NTS

1

COMPOSITE LAYUP & BONDING I.A.W. DELASTEK PROCESS SPEC. TEC-77  
MATERIAL STORAGE & HANDLING TO BE I.A.W. DART QSI 006  
MAIN LAYUP USES FIBERCOTE E-761/7781 EPOXY FIBERGLASS.  
FILL WITH EPOCAST 87269 OR MAGNOBOND 77 A & B AND MA560 FOAM/ NB-51/30 FOAM

2

FINISH: DUPONT HIGHBUILD GREY PRIMER 1144-S

3

MAKE PARTS IN ACCORDANCE WITH THE FOLLOWING TOOLS/MOLDS:

PART	TOOL
D3140-05	B30-23000-01T
D3140-06	B30-23000-02T
D3140-07	B30-23000-03T
D3140-08	B30-23000-04T
D3140-57	B30-23000-57T
D3140-61	B30-23000-61T
D3140-63	B30-23000-63T
D3140-69	B30-23000-69T
D3140-71	B30-23000-71T
D3140-73	B30-23000-73T
D3140-75	B30-23000-75T
D3140-77	B30-23000-77T
D3140-79	B30-23000-79T
D3140-89	D3140-89T1
D3140-301	D3140-301T1
D3140-303	D3140-303T1

RELEASED  
06.11.13 #

4

MATERIAL: 2024-T3 (QQ-A-250/4) 0.032 THICK (M2024T3S.032)  
FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

5

MATERIAL: 2024-T3 (QQ-A-250/4) 0.020 THICK (M2024T3S.020)  
FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

6

MATERIAL: 5052-H32/H34 (QQ-A-250/8) 0.040 THICK (M5052H32S.040)  
FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

7

MATERIAL: POLIMEX TR75 1" THICK 4.5 LB KLEGECELL

8

ALL DIMENSIONS IN INCHES

9

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

10

MATERIAL: 6061-T6 (QQ-A-250/11) 0.063 THICK (M6061-T6S.063)  
FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

11

DOUBLER TO SIT ON TOP OF FOAM AT THIS LOCATION

12

DOUBLER TO BE RECESSED FLUSH INTO FOAM AT THIS LOCATION

13

RUBBER STAMP WITH DART P/N D3140-05/-06/-07/-08 USING MIL-STD-130

14

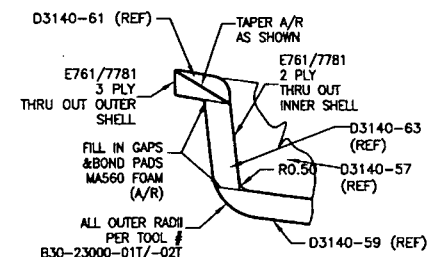
PARTS MUST BE SCUFFED WITH 80 GRIT SANDPAPER PRIOR TO ACID ETCH AND  
ALODINE PER DART QSI 005 4.1

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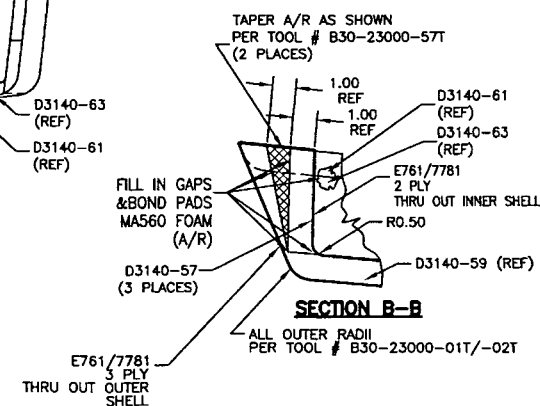
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3140-59

D3140-301  
(USE D3140-303 ON -06)

06.11.13 #



E761/7781  
THRU OUT 3 PLY OUTER SHELL

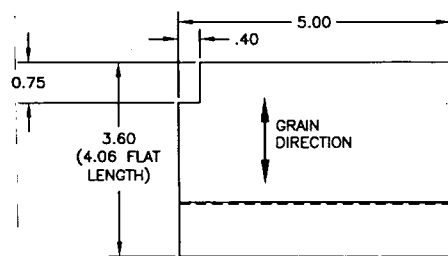
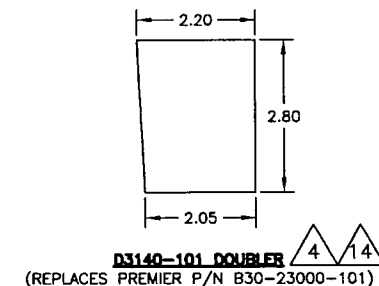
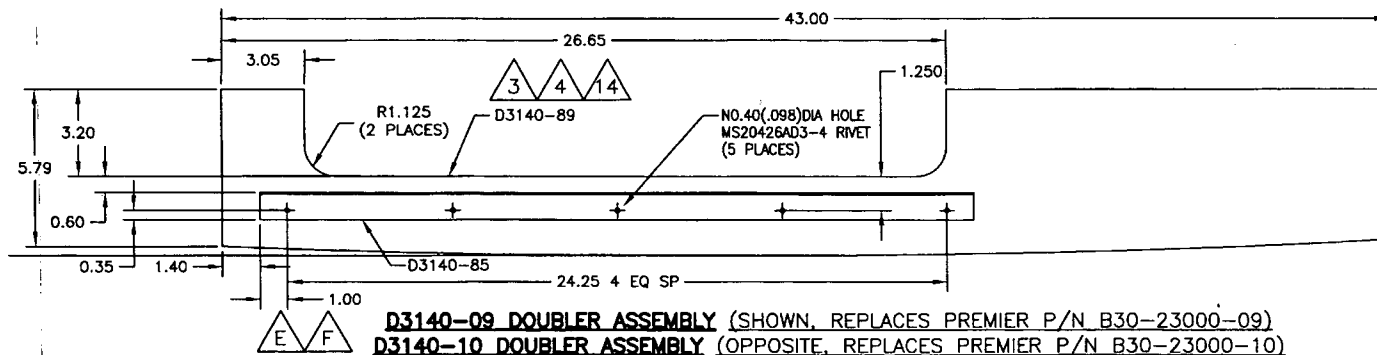
Three triangles are shown, labeled 1, 2, and 3 from left to right. Each triangle is an isosceles triangle with its base horizontal. The numbers 1, 2, and 3 are centered inside each triangle.

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DATE <b>06.10.06</b>		TITLE <b>DOOR</b>		SCALE	
				NTS	

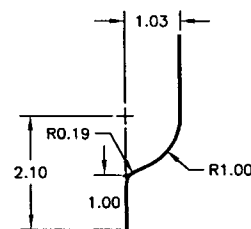
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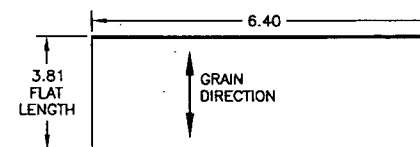




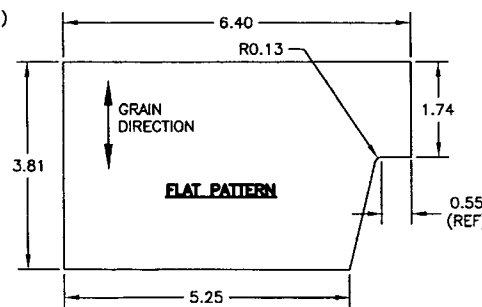
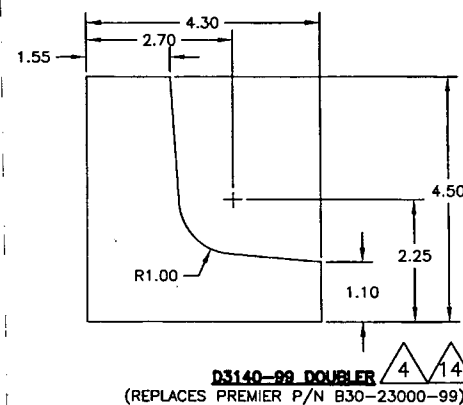
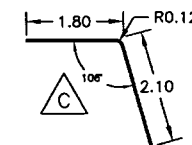
D3140-91F FLAT PATTERN  
(USE TO MAKE D3140-91/-92 DOUBLERS)



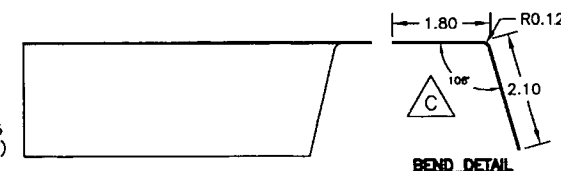
D3140-92 DOUBLER (4 14 F)  
(SHOWN, REPLACES PREMIER P/N B30-23000-92)  
D3140-91 DOUBLER  
(OPPOSITE, REPLACES PREMIER P/N B30-23000-91)



D3140-95 DOUBLER (4 14)  
(REPLACES PREMIER P/N B30-23000-95)



D3140-97F FLAT PATTERN  
(USE TO MAKE D3140-97/-98 DOUBLERS)



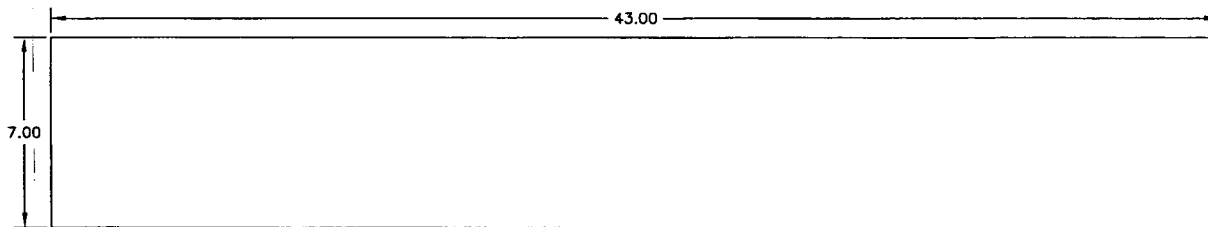
D3140-97 DOUBLER (4 14)  
(SHOWN, REPLACES PREMIER P/N B30-23000-97)  
D3140-98 DOUBLER  
(OPPOSITE, REPLACES PREMIER P/N B30-23000-98)

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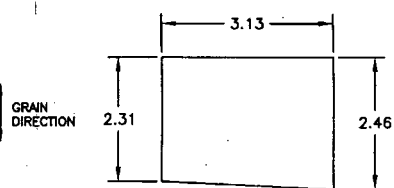
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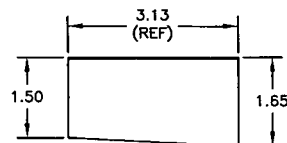
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DATE 06.10.06	TITLE DOOR	SCALE NTS	



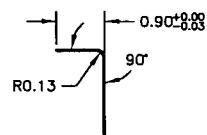
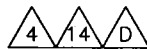
**D3140-87 DOUBLER**  $\triangle 4 \triangle 14$   
(REPLACES PREMIER P/N B30-23000-87)



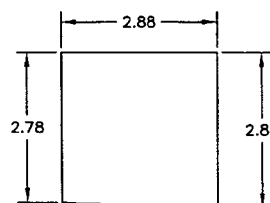
**D3140-105F FLAT PATTERN**  
(USED TO MAKE D3140-105/-106 BRACKETS)



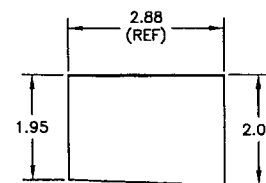
**D3140-105 DOUBLER**  
D3140-106 OPPOSITE



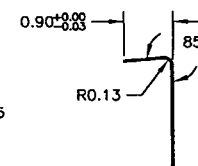
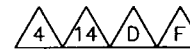
GRAIN DIRECTION



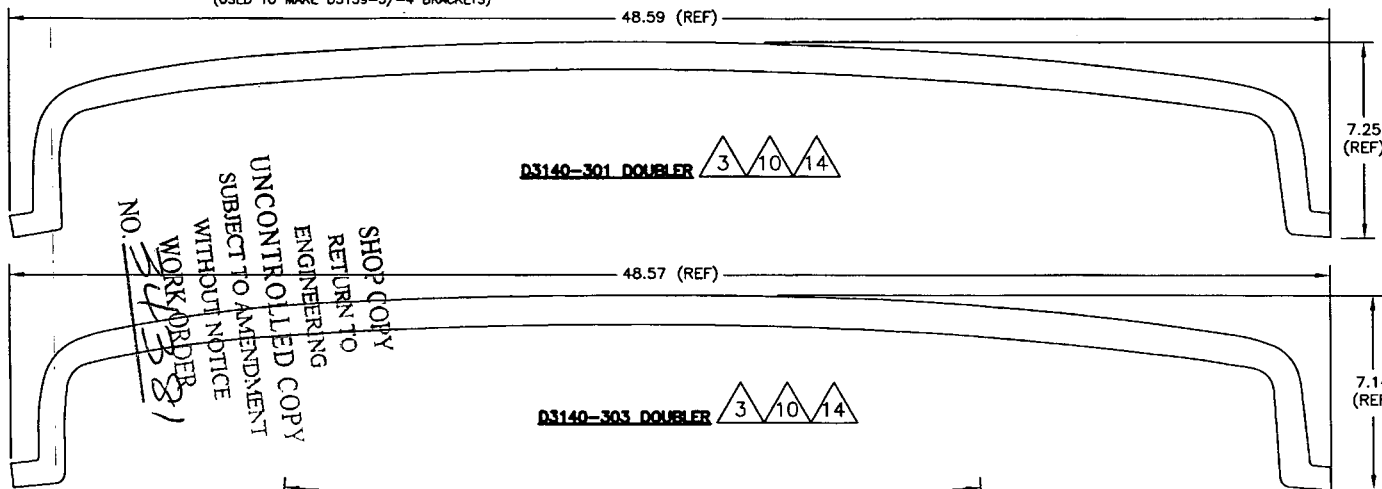
**D3140-103F FLAT PATTERN**  
(USED TO MAKE D3140-103/-104 BRACKETS)



**D3140-104 DOUBLER**  
D3140-103 OPPOSITE



**D3159-3F FLAT PATTERN**  
(USED TO MAKE D3159-3/-4 BRACKETS)



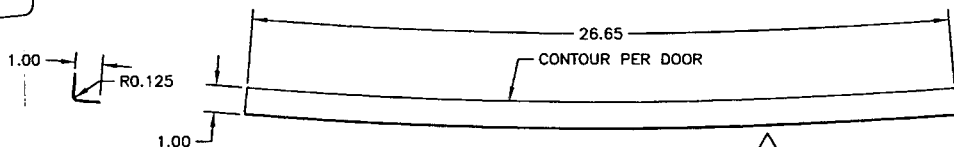
**D3140-301 DOUBLER**  $\triangle 3 \triangle 10 \triangle 14$

**D3140-303 DOUBLER**  $\triangle 3 \triangle 10 \triangle 14$

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6.11.13

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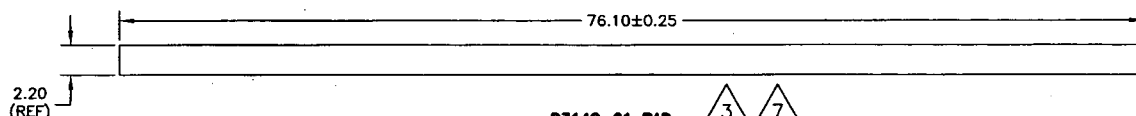


**D3140-85 ANGLE**  $\triangle 6$   
FLAT PATTERN: 26.65" x 1.90"  
(REPLACES PREMIER P/N B30-23000-85)

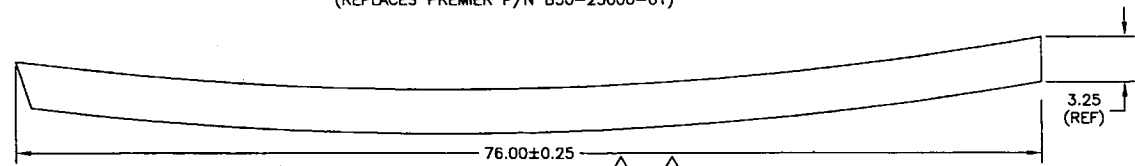
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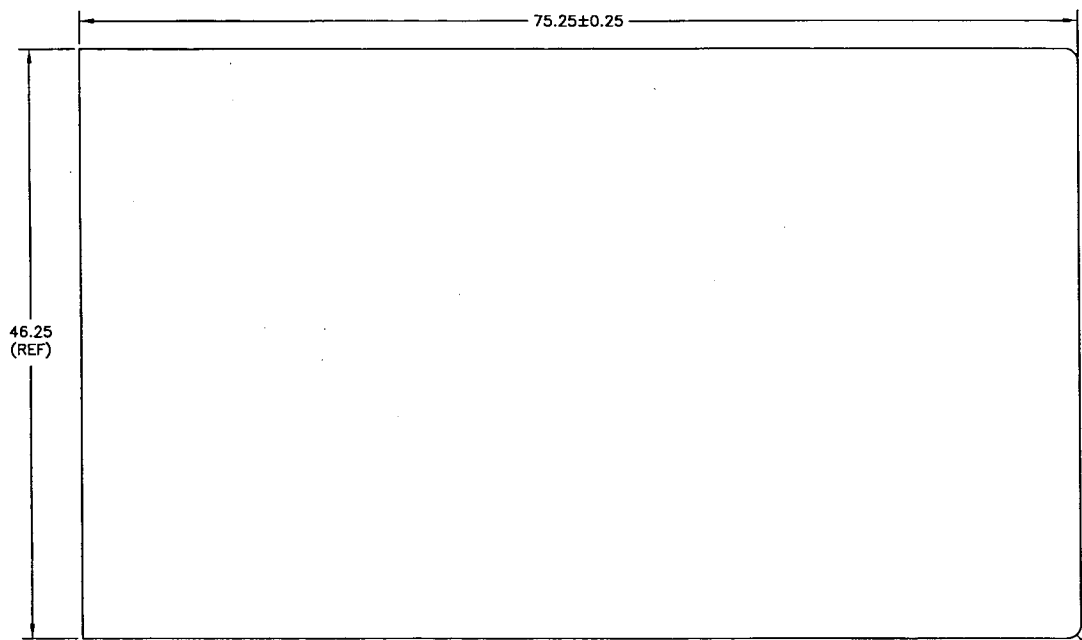
DESIGN <b>4</b>	DRAWN BY <b>CB</b>	<b>DART</b> DART AEROSPACE LTD. WARRICKBURGH, ONTARIO, CANADA
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3140
DATE 06.10.06	TITLE DOOR	REV. F SHEET 6 OF 7 SCALE NTS



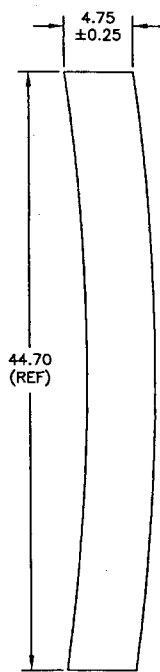
**D3140-61 PAD**  $\triangle 3$   $\triangle 7$   
(REPLACES PREMIER P/N B30-23000-61)



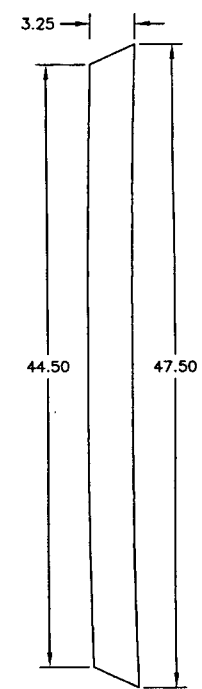
**D3140-63 PAD**  $\triangle 3$   $\triangle 7$   
(REPLACES PREMIER P/N B30-23000-63)



**D3140-59 PAD**  $\triangle 7$   
(REPLACES PREMIER P/N B30-23000-59)



**D3140-57 PAD**  $\triangle 3$   $\triangle 7$   
(REPLACES PREMIER P/N B30-23000-57)



**D3140-241 DOUBLER**  $\triangle 5$   $\triangle 14$   
(REPLACES PREMIER P/N B30-23000-241)

RELEASED  
06.11.13

R1.00  
(2 PLACES, REF)

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		DATE		DRAWING NO.	REV. F
		06.10.06		D3140	SHEET 7 OF 7
				TITLE	SCALE
				DOOR	NTS

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